1982

NORTHEASTERN AREA

FOREST PEST CONDITIONS

Summary of the Status of the Major Forest Insect and Disease Pests

for

Connecticut (CT)	Missouri (MO)
Delaware (DE)	New Hampshire (NH)
Illinois (IL)	New Jersey (NJ)
Indiana (IN)	New York (NY)
Iowa (IA)	Ohio (OH)
Maine (ME)	Pennsylvania (PA)
Maryland (MD)	Rhode Island (RI)
Massachusetts (MA)	Vermont (VT)
Michigan (MI)	West Virginia (WV)
Minnesota (MN)	Wisconsin (WI)

The information for this report was supplied by State Forestry Agencies and the USDA Forest Service (Northeastern Area, State and Private Forestry, Forest Pest Management Staff, at the Durham, NH, Morgantown, WV and St. Paul, MN Field Offices)

Prepared by:
James W. Walters
Pathologist
Peter A. Rush
Entomologist
St. Paul Field Office

STATUS OF INSECTS

Insect	Host(s)	Location - Remarks
Aspen blotch miner Phyllonorycter tremuloidiella (Braun)	Aspen	MI-Defoliation occurred throughout the upper peninsula MN-750,000 acres affected in northern Minnesota.
Basswood thrips Sericothrips tiliae Hood	Basswood	WI-Was present in scattered areas over approximately 200,000 acres. Crowns were up to half defoliated. The area is expanding while the severity of defoliation decreases - this may continue to occur.
Beech scale Cryptococcus fagisuga Lindinger	Beech	WV-First detected in 1981, surveys reveal over 70,000 acres of the Monongahela National Forest are now infested.
Birch leaf miner Fenusa pusilla (Lepeletier)	Birches	MA-This insect in a complex with other leaf miners defoliated 40,600 acres in western portions of the state - populations are expected to remain at present levels in 1983. MI-Populations are down again for the second year. VT-This state experienced its usual widespread damage to white and gray birches.
Browntail moth Euproctis chrysorrhoea (Linnaeus)	Hardwoods	MA-Approximately 1,000 acres defoliated in the Cape Cod National Seashore. ME-Populations are generally very low.
Cherry scallop shell moth, Hydria prunivorata (Ferguson)	Black cherry, beech, maple	PA-7,500 acres of defoliation statewide - populations are expected to increase. VT-Occasional light defoliation - populations are down from 1981.

Insect	Host(s)	Location - Remarks
Eastern tent caterpillar Malacosoma americanum (Fabricius)	Black cherry, crabapple, and other hardwoods	IN-Populations have declined statewide but southcentral IN had localized heavy populations resulting in moderate to heavy defoliation. Populations will be light again in 1983. MO-Very heavy populations existed over the southern half of the state, about 3 million acres - they should remain high in 1983. RI-Moderate defoliation in Providence and Kent counties. VT-Population levels relatively low throughout the state. WV-Populations collapsed in 1982 and should remain low in 1983.
European pine sawfly Neodiprion sertifer (Geoffroy)	Pines	IN-Light damage throughout the state with scattered areas of moderate defoliation. Populations are down from 1980 and 1981, further decreases expected in 1983. MD-Moderate to heavy defoliation on 7,830 acres. May continue in 1983. This is the first year of infestation. MI-Slight damage, populations appear down from previous years.
Fall cankerworm Alsophila pometaria (Harris)	Oaks, maples, elm	MA-5,500 acres of defoliation detected in Dukes County in 1982 - expect populations to build in 1983. MD-This insect was part of a complex that defoliated 28,800 acres. ME-Approximately 4,000 acres of noticeable defoliation in the western coastal counties. NH-Approximately 1,000 acres were severely defoliated in southeast NH along the coast. RI-Moderate defoliation in Kent and Washington counties. More severe defoliation is expected in 1983.
Fall webworm Hyphantria cunea (Drury)	Hardwoods	MO-Scattered and spotty light to moderate defoliation of over

Insect	Host(s)	Location - Remarks
		400,000 acres in southern portions of the state. Populations should be moderate in 1983. VT-Scattered low populations reported. WV-Common throughout the state but no serious damage reported.
Forest tent caterpillar *Malacosoma disstria* Hubner	Aspen, oak, maple, beech basswood, ash	DE-An estimated 1,000 acres was defoliated in 1982 in Kent and Sussex counties - this is a decrease from 1981. IN-Scattered reports. Very low populations since 1979-80. MD-This insect in a complex with the fall cankerworm and the half-wing geometer defoliated 28,800 acres, an increase that may increase even further. ME-About 7.5 million acres defoliated in the eastern half of the state. After 3 years, populations are starting to collapse. MI-Three sections of northern hardwoods were defoliated along Lake Superior in the upper peninsula. MN-Populations are down from 1981. 250 thousand acres of of light defoliation was detected in Carlton and St. Louis Co's. NY-Defoliation in Delaware and Sullivan counties totaled approximately 200,000 acres. Populations have been up since 1980 but decreased somewhat in 1982. VT-Defoliation totaled 325,000 acres, up from the 117,000 acres in 1981. Some decrease is expected in 1983. WI-Scattered pockets of defoliation totaled approximately 1 million acres. Northwestern populations decreased while northeastern populations remained high. Similar activity can be expected in 1983.

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Gypsy moth *Lymantria dispar* (Linnaeus)	Oaks, other hardwoods, and some conifers	The total acreage for the areas of moderate to heavy defoliation decreased this year. Areawide, 8.2 million acres were defoliated in 1982 compared to the 12.9 million acres defoliated in 1981, a 36 percent decrease. CT-803,802 acres were defoliated in 1982 - this represents a 46 percent decrease from 1981. DE-1,265 acres were defoliated this year. Population levels lower with moth activity moving southward. 350 acres were treated in 1982. IN-Male moth captures continue to increase - six counties infested in 1980, eight counties infested in 1981, and 21 counties infested in 1982. Spot infestations have been identified in Bartholomew, Elkhart, and Vigo counties. 500 acres were treated in Vigo county for eradication purposes in 1982. IA-Moths trapped at nine locations. ME-574,537 acres of defoliation in 1982, a decrease of 12 percent. Acres treated: 1,910 MD-Defoliation totaled 9,162 acres. Large population increases occurred this year. Defoliation would have been considerably higher (projected at 60,000 acres) had it not been for the treatment of 48,364 acres statewide. MA-Populations are generally declining although an area in southcentral MA, Middlesex and Worcester counties, appears to be increasing. Acres of defoliation totaled 1,383,265 with 976,095 being moderate to heavy. MI-92 acres defoliated, 11 acres moderate to heavy. Seven blocks totaling 3,408 acres were treated. About the same levels are expected in 1983.

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		MN-105 moths trapped in Minneapolis/St. Paul. There are established populations near Lake Phalen in St. Paul and in the suburb of Woodbury east of St. Paul.
		MO-No infestations detected yet. Moth catches increased from nine last year to fourteen statewide in 1982.
		NH-Defoliation totaled 878,273 acres in 1982 compared to 1,947,000 acres in 1980. Further decline is anticipated in 1983.
		NJ-675,985 acres defoliated, down from 1981 and further decline is expected in 1983. A total of 101,741 acres were treated during 1982.
		NY-Acres defoliated totaled 825,629, a reduction of about 64 percent from 1981. 10,284 acres were treated in 1982.
		PA-Defoliation in the eastern two-thirds of the state totaled 2,351,317 acres, a slight decrease from 1981 and further decline is anticipated in 1983. Approximately 500,000 acres were treated in 1982.
		RI-Acres defoliated increased from 272,556 in 1981 to 658,000 in 1982, an increase of 141 percent.
		VT-Populations collapsed in 1982-9,864 acres defoliated compared to 48,979 in 1981. Low levels are expected in 1983.
		WV-Berkeley, Jefferson, and Morgan counties are generally infested and defoliation is expected in 1983.
		WI-One new infestation has been located at Elm Grove in Waukesha County.

Insect	Host(s)	Location and Remarks
Introduced pine sawfly *Diprion similis* (Hartig)	White, red, Scots, and jack pines	ME-Population are down from 1981 levels. Little noticeable defoliation in 1982. MN-A 40 acre block was treated in Morrison county. VT-Light defoliation of ornamental white pine occurred in central Vermont.
Jack pine budworm *Choristoneura pinus* Freeman	Jack pine, Red pine	MI-An estimated 624,464 acres of moderate to severe defoliation-nearly double the 1981 figure. Some areas are beginning to show signs of population reductions. 3,800 acres of young plantations were treated. MN-A total of 11,000 acres in 4 counties are infested. Of that, about 9,000 acres have low population levels. The situation appears static. WI-Generally light defoliation with some pockets of moderate defoliation affecting 135,000 acres in Ashland and Bayfield counties. The area of the infestation will probably remain the same while the intensity of the defoliation increases.
Large aspen tortrix *Choristoneura conflictana* (Walker)	Aspen, poplar birch	MI-Widespread defoliation in the northern half of the lower peniusula with some top-kill and die-back occurring on the poorer sites. Populations are declining. VT-Occasional light defoliation of roadside aspen.
Larger elm leaf beetle *Monocesta coryli* (Say)	Elms	WV-1982 was the third year of defoliation due to high populations throughout the state.
Locust leaf miner *Odontota dorsalis* (Thunberg)	Black locust	IN-Light to moderate damage in southeast Indiana with light damage to the rest of the southern portions of the state. Populations have been decreasing since 1980. PA-Moderate to heavy defoliation

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		of a 5 county area. This is a decrease from earlier populations and a further decline is expected. VT-Localized light defoliation. WV-Heavy damage in east central and eastern panhandle portions of the state.
Loopers, a complex elm spanworm Ennomos subsignarius (Hubner) Linden looper Erannis tiliaria (Harris) Fall cankerworm Alsophila pometaria (Harris) Half-wing geometer Phigalia titea (Cramer)	Oaks, elms, hickories, maples, black cherry, basswood	IN-Populations that covered 1.5 million acres throughout south-central Indiana collapsed in 1982. No defoliation is expected in 1983 although scattered oak and hickory mortality will continue, probably for several years. MD-Moderate to heavy defoliation over 28,800 acres - more is expected in 1983. MI-Populations are down from 1981. MO-Only light to negligible defoliation over 4 million acres due to a population collapse. PA-The area of defoliation increased to over 10,000 acres in 1982. Further increases are expected. WV-About 100,000 acres of complete defoliation and an additional million acres of light to moderate defoliation. Populations are collapsing - white oaks hit the hardest.
Maple leafcutter Paraclemensia acerifoliella (Fitch)	Maples, beech and birch	MI-Approximately 1,000 acres of moderate to heavy infestations. VT-Populations have increased considerably causing 13,671 acres of defoliation compared to 1,350 acres in 1981.
Maple trumpet skeletonizer Epinotia aceriella (Clemens)	Red and sugar maples	MI-This is the second year of of high populations throughout the upper peninsula and in three northwestern counties of the lower peninsula. It is primarily a nuisance pest. VT-Widespread light defoliation of sugar maples.

Insect	Host(s)	Location and Remarks
Oak leaftier Croesia semipurpurana (Kearfott) and Oak leafroller Archips semiferana (Walker)	Oaks	IN-Populations detected in 1981 have collapsed. ME-Apparently less defoliation than in 1981 but it is difficult to assess because of other defoliators. PA-About 100 acres affected in Potter county - that may increase. VT-Light defoliation on 550 acres.
Pales Weevil Hylobius pales (Herbst)	Pines	VT-Scattered light to moderate damage to Scots pine. WV-Populations seem to be increasing - very high numbers reported in several plantations.
Periodical cicada Magicicada septendecim (Linnaeus)	Hardwoods	PA-Marked increases in emergence this season with thousands of acres affected. Heavy flagging in some area. Populations are expected to decline. WV-Much oviposition damage in central and northern West Virginia due to very heavy emergence of brood this year.
Pine spittlebug Aphrophora parallela (Say)	Scots, white and jack pines	MI-Alger, Marquette and Schoolcraft counties in the upper peninsula report high populations. Spotty infestations are found in plantations in the northern lower peninsula also. Populations are about the same as last year and are expected to remain high and widespread. VT-Populations are increasing in Caledonia county - a threat to Christmas tree growers. WV-Heavy populations are causing damage in many scattered locations.
Pine tussock moth Dasychira pinicola (Dyar)	Jack and red pines	MN-10,000 acres near Pine City, MN are still affected by low level populations.

Insect	Host(s)	Location and Remarks
		WI-Defoliation of 25,000 acres (down from 40,000 + in 1981) was generally light to moderate with a few pockets of severe damage and some topkill. Further declines are expected in 1983.
Red pine adelgid *Pineus boerneri* Annard	Red pine	CT-MA-RI - In scattered small red pine plantations. Acreages unknown. Along the southern border only in Massachusetts.
Red pine scale *Matsucoccus resinosae* Bean and Godwin	Red pine	CT-NJ-NY-PA - In scattered small red pine plantations. Acreages are not large due to the limited distribution of red pine. In Pennsylvania, only a single report from Philadelphia.
Red-headed pine sawfly *Neodiprion lecontei* (Fitch)	Red and jack pines	MI-Infestations were scattered over a 100 square mile area in northwestern Michigan VT-Light defoliation of red pine.
Saddled prominent *Heterocampa guttivitta* (Walker)	Maple, beech, birch, ash, and cherry	ME-Moderate to severe defoliation of 10,000 acres in southwest Maine, a decrease from the 186,000 acres reported in 1981. NY-Populations remain low. PA-Populations are increasing - about 2,000 acres were defoliated in 1982. Further increases are expected in 1983. VT-Southern populations have collapsed while low levels continue to occur in northern Vermont.

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Saratoga spittlebug *Aphrophora saratogensis* (Fitch)	Red and jack pines	MI-Monitored 1,000 acres of high risk pine. Populations continue to increase as more acres of alternate host are planted to pine - 153 acres of red pine were aerially treated with malathion in 1982. WI-Generally light populations on 1,000 acres of state land. No control needed. Scattered areas of higher activity on the Nicolet National Forest.
Spruce budworm *Choristoneura fumiferana* (Clemens)	Balsam fir, spruces, and hemlock	With the exception of Vermont, spruce budworm populations and associated defoliation decreased again in 1982 - similar decreases were reported in 1981. ME-Moderate to severe defoliation of 3.8 million acres with 823,000 acres being treated in 1982. The Bureau of Indian Affairs reports 52,293 acres of defoliation with 16,847 acres being treated. MI-Populations are low again for the second year with 116,930 acres of light - moderate defoliation occurring. Light infestations detected in the northern lower peninsula. MN-126,700 acres defoliated in 1982 - some expansion may occur in 1983. NH-Slightly less defoliation in 1982 with 39,000 acres reported. This is the third year of declining populations. NY-Populations remain low. VT-Acreage defoliated increased to 154,000 in 1982 compared to the 96,000 acres reported in 1981. Further increase is expected as mortality begins to occur on about 85,000 acres. WI-Populations decreased even further in 1982 as defoliation was barely detectable. Further declines are expected in 1983.

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Sycamore lacebug *Corythucha ciliata* (Say)	Sycamore	WV-Third year of heavy damage throughout the state.
White pine aphid *Cinara strobi* (Fitch)	White and red pines	IN-Scattered reports statewide - light to heavy on individual trees - populations are static. WV-Extremely heavy populations in Christmas tree plantations throughout western West Virgina.
White pine weevil *Pissodes strobi* (Peck)	White, red and jack pines, spruces	ME-Still an important pest of plantation white pine where the number of damaged leaders is sometimes quite high. MI-Increasing populations over the last 20 years are reaching levels high enough to cause serious damage in portions of the northern lower peninsula. Further increases are expected. VT-Damage is stable at moderate levels.
Zimmerman pine moth *Dioryctria zimmermani* (Grote)	Red and other pines	MI-Infestation levels range from just a few scattered tips to over 90 percent in red pine plantations in the northern half of the lower peninsula. Populations are down somewhat when compared to 1981 - about 2 million acres now affected. WI-Populations showed drastic declines in 1982. Future trends are uncertain.

STATUS OF DISEASES

Disease	Host(s)	Location and Remarks
Annosus root rot *Heterobasidion annosum* (Fr.) Bref.	red & shortleaf pine	MO-light mortality in several plantations on Mark Twain N.F. VT-occasional mortality in red pine plantations.
Anthracnose *Gnomonia* spp.	maple and sycamore	WV-low infection level on sycamore; light to moderate injury on maple.
Armillaria root rot *Armillaria mellea* (Vahl ex Fr.) Kummer	conifers & hardwoods	Areawide; associated with hemlock decline on Menominee Indian Reservation, WI; common on defoliated sugar maple and other hardwoods in VT.
Arsenic toxicity	red pine	MN-67,000 containerized seedlings lost due to exposure to arsenic based wood preservative.
Ash dieback	white ash	PA-occurred on 500 ac. statewide; appears to be increasing. VT-widespread and increasing in southern part of state.
Aspen leaf bronzing	aspen	Lake States; about same level as 1981 except WI where 20 new locations were found (total of 30-50 statewide)

Disease	Host(s)	Location and Remarks
Beech bark disease *Cryptococcus fagisuga* Lindinger; *Nectria coccinea* var. *faginata* Lok. Wats. & Ag.	American beech	PA-northern and eastern part of state; appears to be increasing with about 5% mortality in 1982. VT-light mortality statewide
Butternut canker *Sirococcus clavigignenti-juglandacearum* Nair, Kos., & Kuntz	butternut	WI-infected trees found in 20 counties; up to 80% of trees cankered and 32% dead.
Diplodia tip blight *Diplodia pinea* (Desm.) Kichx.	Austrian, jack, red and Scots pine	IA-scattered infections statewide. IL-serious infection level on Scots pine in LaSalle Co. MI-losses occurred on Scots pine Christmas trees in Newaygo Co. MN-infections on red pine common in Itasca, Pine and St. Louis Co's. VT-caused dieback on ornamentals in Windham Co.
Dogwood branch mortality *Discula* sp.	dogwood	PA-eastern half of state; 20% branch mortality; increasing fungicide trials will be done in 1983.
Dutch elm disease *Ceratocystis ulmi* (Buism.) C. Mor.	elm	Areawide; widespread tree mortality in IA, IL, MN, MO, VT, WI, and WV; approx. 80% of pole size or larger elms in WI had DED in 1982.

Disease	Host(s)	Location and Remarks
Eastern dwarf mistletoe *Arceuthobium pusillum* Pk.	black spruce	Common in black spruce stands throughout the Lake States; control completed on 2,300 acres in Itasca, Koochiching and St. Louis Co's., MN
European larch canker *Lachnellula willkommii* (Hartig) Dennis	eastern larch	ME-found in 6 new townships in coastal Washington Co. for a total of 12 since its discovery in 1981; some tree mortality in Cutler and Jonesboro Townships.
Frost injury	red and white spruce jack pine, aspen, oak	extensive local injury in plantations across northern MI, MN, and WI.
Gall rust *Cronartium quercuum* (Berk.) Miy. ex Shirai *Endocronartium harknessii* (J. P. Moore) T. Hirat.	jack and Scots pine	similar range and severity to 1981 MI-prohibits production of jack pine in parts of the Upper Peninsula MN-bare root nursery had 70% cull in fall lifted 2-0 jack pine.
Honeysuckle leafblight *Herpobasidium deformans* Gould	honeysuckle	IA-caused growth loss and premature defoliation in nursery stock. Dollar losses due to increased cull are estimated at $8,000 for the 1983 crop.
Hypoxylon canker *Hypoxylon mammatum* (Whal.) Mill.	aspen	common throughout aspen range

Disease	Host(s)	Location and Remarks
Larch decline	eastern larch	VT-affecting 9,000 acres with some mortality in Caledonia and Orleans Co's.
Larch needlecast *Mycosphaerella laricina* (Hart.) Neg.	European larch	Table 1; little mortality in most infected plantations.
Lophodermium needlecast *Lophodermium seditiosum* Minter, Staley, & Miller	red pine	MI and MN-nursery losses totaled one million seedlings.
Maple decline	sugar maple	MI-prevalent in Marquette and Menominee Co's.; primarily a problem in urban areas. NY-Delaware Co. has 100,000 acres affected with mortality up tp 100%. VT-common, especially on ornamentals. WI-scattered top kill on sugar maple in the northern part of the state.
Naemacyclus needlecast *Naemacyclus minor* Butin	Scots pine	WV-several Christmas tree growers suffered losses.
Oak decline	oak	MD-80 acres of dieback and mortality in Baltimore Co. MO-mortality on Mark Twain N.F. continued with scarlet oak most affected; secondary organisms involved are Armillaria root rot, two-lined chestnut borer and hypoxylon canker (*H. atropunctatum* (Schw. ex Fr.) Cke.).

Disease	Host(s)	Location and Remarks
Oak wilt *Ceratocystis fagacearum* (Bretz) Hunt	oak	IA-statewide; increased number of infection centers. MI-first reported in Menominee Co. in 1981; located in 22 infection centers; 1,000± trees lost. MN-640 acres in Anoka and Sherburne Co's. treated with Tordon RTU; losses exceeded $1,280. MO-scattered infection centers statewide; remains at endemic level.
Physiological needle droop	red pine	this abiotic disease, caused by water deficiency, occurred in plantations on the Superior N.F., MN and Nicolet N.F., WI; some seedling mortality also occurred in Roseau, St. Louis and Lake of the Woods Co's., MN.
Pine needle rust *Coleosporium* sp.	jack and red pine	widespread and common in northern parts of Lake States; 2-3 acres of Christmas trees lost in Menominee Co., MI; on Nicolet N.F., WI one red pine plantation was 100% infected and suffered substantial mortality from needle rust and deer browsing combined.
Pine wood nematode *Bursaphelenchus xylophilus* (Ste. and Buh.) Nickle	conifers	Area wide except ME, NH, and RI; levels similar to 1981; considered a native pest.

Disease	Host(s)	Location and Remarks
Red spruce decline	red spruce	NY-Tug Hill Plateau and Adirondacks; red spruce mortality continues to increase. VT-scattered locations statewide.
Rhabdocline needlecast *Rhabdocline pseudotsugae* Syd.	Douglas-fir	ME-second report of this disease in the state; found in Door Co. Christmas tree plantation.
Rhizosphaera needlecast *Rhizosphaera kalkhoffii* Bud.	spruce	WI-scattered losses in white spruce Christmas trees MI-detected on Christmas trees in Delta and Menominee Co's.
River birch decline (unknown cause)	river birch	IA-mortality and top kill statewide.
Scleroderris canker *Gremmeniella abietina* (Lagerb.) Morelet	jack, red & Scots pine	Lake States (N. Amer. Strain)-stable to declining; difficult to detect in most plantations Northeastern States (European strain)-stable to declining; one new infection center of 30 acres in Washington Co., ME.
Septoria leaf spot *Septoria musiva* Pk.	balsam poplar	MN-infection level declined in Roseau and Lake of the Woods Co's; 90,000 acres affected, but no losses occurred.

Disease	Host(s)	Location and Remarks
Sirococcus shoot blight *Sirococcus strobilinus* Preuss.	red pine	MI-stable infection levels on Ottawa N.F. MN-light infection on Nett Lake Indian Reservation; low levels in remainder of state. WI-north central part of state; 50-90% of new shoots on understory trees were killed this year.
Stunting (unknown cause)	white spruce & red pine	Lake States nurseries continued to sustain losses due to culling undersize seedlings.
Swiss needlecast *Phaeocryptopus gaumanni* (Rohde) Petrak	Douglas-fir	MI-Christmas tree plantations in Delta and Menominee Co's. VT-defoliation on 5 acres of Christmas trees.
White pine blister rust *Cronartium ribicola* Fisch.	eastern white pine	Lake States-remains endemic in many white pine stands.
White pine root decline *Verticicladiella procera* Kend.	eastern white pine	IA-scattered in several locations statewide.
White trunk rot *Phellinus tremulae* (Bond.) Bond. et Borriss	aspen	Throughout range of aspen.
Windburn	hardwoods	VT-marginal leaf necrosis on 2,000 acres of hardwoods.

Disease	Host(s)	Location and Remarks
Winter injury	all species	Needle tip dieback occurred on Ottawa N.F., MI, Nicolet N.F., WI and Superior N.F, MN. MD-tip dieback on loblolly pine at Buckingham Forest tree Nursery.